Bioscience Media, Riga, Latvia, EU
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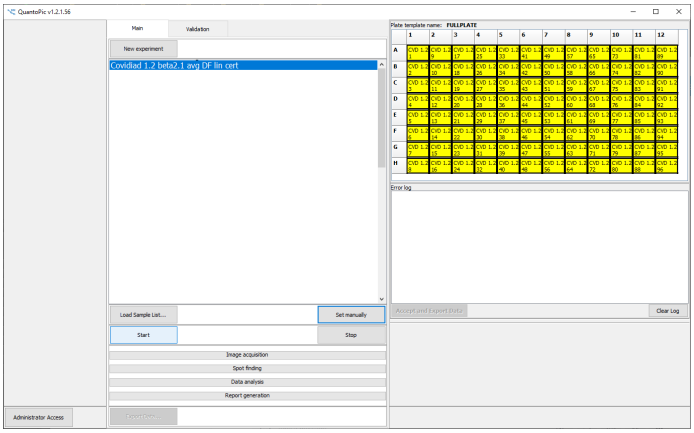
Bioscience Media

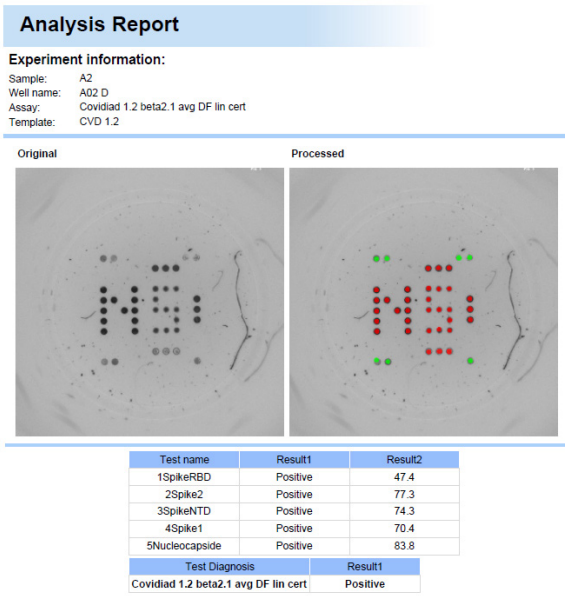
Colorwatcher, Colorimetric Array Reader

Colorwatcher is a compact and portable instrument designed for imaging colorimetric arrays (for example, DNA/RNA, antigen/antibody, protein biochips). The instrument by standard operates in brightfield and darkfield illumination modes with bottom and top illuminations respectively. The instrument is able to work with 96-well plate, a 12 x 8 well strip, as well as microscopic glasses (placed in a special adapter). The device is equipped with a highly sensitive CMOS camera. The instrument has an automatic mechanism of 96 well plate ejection outside the body.

The instrument can be operated by a 20V portable lithium-ion battery, which makes the device usable in the field studies or point-of-care.

The compact design allows the device to be carried in the hand luggage of the aircraft.





Software Features:

- End-User interface, with simplified interface, where user just chooses assay, loads samples and gets results
- Automated image acquisition, analysis and report generation (up to 12x12 array in 96 well plate in under 3 minutes)
- Automatic array finder via machine learning and image recognition
- Grid lay-outing (Manual and Automatic)
- Password protected Assay Developers interface with full access to the vast software parameters
- Analysis of images by the average/median intensity of the spots
- Qualitative/quantitative analysis of the arrays
- Creating Qualitative/quantitative analysis assays
- Quantitative assays with 4/5 parameter logistics functions, etc.
- Setting multi level interpretation thresholds for different type of samples in the same well (e.g. tolerance to egg and lettuce)
- Reports available in PDF, CSV, EXCEL files
- Control of camera exposure, gain, XYZ kinematics.

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Specifications	
Illumination	Brightfield and darkfield (bottom and top illumination)
Arbitrary units measurement range	0 to 65535
Certified OD measurement range (for brightfield)	0.1 to 2.0 OD
Certified Diffused reflectance meas. range (for darkfield)	2 to 99
Vessels	96 well plate/12 x 8 well strip/4 microscope slides
Light source	LED
Lifetime of the light source	>10 000 hours
Data interface for unit controls / camera	USB 2.0 / USB 3.0
Camera max. resolution	3 MP, CMOS
Resolution	6 µm per pixel
Image formats	png or tiff, 16 bit
Focus	Manual, Automatic, adjustable via PC
Software	Included
PC requirements (recommended)	CPU: Intel i7, RAM: 8 GB Video card: Nvidia GTX 1050 Ti 4GB, or better (Capability only with Nvidia cards) SSD: 256 GB, OS: Windows 10 (64 bit)
Size (W×D×H)	330 × 345 × 150 mm
Weight, w/o power supply	not more than 6 kg
Power supply	Input AC 100–240 V 50/60 Hz, Output DC 20-24 V, 2.5A

Software developers interface, Assay Editor interface and Analytes template in well